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COUNTRY: Costa Rica

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SUBJECT: Power/Transportation/Maps/
Geology/Pedology

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SOURCE

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1. a. Water Power Sites: The city of San Jose is served by the privately owned Compania Nacional de Fuerza y Luz. This company has a steam power plant. Other sections of Costa Rica are served by a government company, the Instituto Costarricense de Electricidad, which has scattered plants, mostly hydroelectric. The total capacity of this government power company is about 10,000 kilowatts in six plants. Costa Rica is currently suffering from a severe power shortage. The private company is attempting to meet the shortage by the construction of a new 10,000 kv steam plant at San Antonio near San Jose. The government power company is engaged in a hydroelectric project on the Rio Grande at La Garita in the province of Alajuela. The installation now is being made for 30,000 kv with provisions for doubling that capacity in the future. Electricite de France is serving as consultant to the Costa Rican Government on this project. Stream gauging and detailed mapping is just being started on the Rio Reventazon near Turrialba. Hydroelectric potential there may reach 200,000 kv, according to [a US advisor].
Union Oil Co.
- b. Other Power Sources: There is no coal or oil. A US company is now drilling the southeastern corner of the country.
2. Roads: The major need in Costa Rica is for adequate highways. As of 1952, there were only 1,500 kms of all-weather highways, and most of these are confined to the heavily populated area on the Meseta Central. The Pan-American Highway is paved for about 70 kms north of San Jose and about 30 kms south. The Pan-American Highway runs for about 135 kms south of San Jose, but the unpaved portion is frequently blocked by slides. The remaining 145 kms of the highway from its present terminus at San Isidro del General to the Panama border has not been started. The Pan-American Highway has

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been cut through to the Nicaraguan border on the north but is very rough and is impassable in the rainy season. There is no road of any sort on the Caribbean coast, nor is there any road connecting the eastern portion of the country with the populated areas in the west. Because of the absence of roads, much internal freight is carried by air.

3. Railroads: In general, the railroad system is relatively good. An electric railroad, Ferrocarril Electricito al Pacifico, runs from Puntarenas to San Jose. The northern railroad runs from San Jose to the Caribbean slope serving the port of Puerto Limon. There are also banana railroads running from Ustasi into Panama on the Caribbean coast and on the Pacific coast from Golfito to Puerto Cortes and from Quepos to Parrita. The equipment on the Government owned railroad is fairly good, but that on the northern railway is antiquated steam equipment. There are plans to replace these steam engines by new diesel locomotives. The total length of the Ferrocarril Electricito al Pacifico is 143 kms, and of the northern railway, 523 kms.
4. Internal Air Lines: Passengers and freight are carried by Lineas Aereas Costarriguenses, which flies DC-3's, and by Aerovias del Valle, (abbreviated A. Ve.) which flies Cessnas.
5. Rivers: There are no navigable rivers wholly within Costa Rica. The Rio San Juan, on the northeastern border, is actually within Nicaragua. A portion of the Rio Sixaola, on the northern portion of the Panamanian border, is navigable.
6. Maps: Mapping is done by the Instituto Geografico Nacional, working in cooperation with the Inter-American Geodetic Service. Topographic mapping has been started and is now being carried on in conjunction with the aerial photography being done by the Inter-American Geodetic Service. Nine topographic sheets have been completed [Oct 54]. All topographic mapping is being done on a scale of 1:25,000 with a ten-meter contour interval.
7. Geologic Setting: Although Costa Rica is unique among Central American countries in having a government geologist, there is little known about the geology of the country. The government geologist, Dr. Cesar Dondoli, teaches at the Escuela de Agricultura and serves as geologic advisor to the Ministerio de Agricultura. In general, the cordillera extending from the Nicaraguan to the Panamanian border is composed of Tertiary extrusives and pyroclastics with isolated intrusive masses. West of the cordillera there is a narrow strip of Tertiary sediments along the Pacific coast and

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including also most of the peninsula of Nicoya. On the Caribbean slope from the south end of Lake Nicaragua a band of Quaternary lacustrine and terrestrial sediments extends southeastward covering most of the Caribbean slope south of Lake Nicaragua and south of the Rio San Juan to Puerto Limon. In part, these sediments are terrace deposits, and in part are deposits formed during a once greater extent of Lake Nicaragua. There are folded Tertiary sediments on the Caribbean slope south of Puerto Limon and east of the cordillera. The Meseta Central is composed principally of Tertiary and Quaternary volcanics and pyroclastics.

8. Pedology: The Ministerio de Agricultura has a Direccion de Suelos (soil survey) under the direction of Dr. J. Alberto Torres. This soil survey has recently started work and has confined most of its activity to the rich coffee lands on the Meseta Central. A bulletin on the soils of a portion of the Meseta Central will be published shortly. Aside from the Meseta Central, only isolated studies have been made on soils in other portions of the country. An article in 1943 published by Dr. Dondoli mentions the lateritic soils of the Valley of Rio el General around San Isidro. Dr. Torres told me that the soils around San Isidro del General and around Paraiso in the Meseta Central constituted the best lateritic soils known in the country. I later sampled these and found them to be deeply weathered, truly lateritic soils of a type often rich in aluminum. I took several samples for detailed analysis in the US.

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